

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

FOR RELEASE: 6:30 A.M., E.S.T., APRIL 28, 1976

(202) 426-8787

ISSUED: April 28, 1976

Forwarded to:

Honorable John L. McLucas
Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-76-65 and 66

The National Transportation Safety Board's recent investigation of four Fairchild Model FH-1100 helicopter accidents revealed that the method of attaching the flight controls of this aircraft does not provide optimum protection against human error.

On June 27, 1975, a California Highway Patrol Fairchild Model FH-1100 helicopter, N439F, was involved in an accident at Fremont, California. The pilot and the traffic observer were killed. Examination of the wreckage disclosed that the MS 21042L nut, the AN960-416L washers, and the NAS1104-18 bolt which attached the longitudinal cyclic power cylinder pilot valve rod end, P/N 24-30256-3, to the aft cyclic bellcrank assembly, P/N 24-33286-1, were missing.

On August 28, 1974, a Fairchild Model FH-1100 helicopter, N8673, crashed on takeoff at Pinedale, Wyoming, because of an uncontrollable fore and aft cyclic control system. The pilot and two passengers were injured slightly. Investigation disclosed that the upper attachment bolt had separated from the fore and aft cyclic actuator.

On October 23, 1973, a Fairchild Model FH-1100 helicopter, N369FH, was involved in an accident at Fairbanks, Alaska, when the pilot lost cyclic control. The pilot and two crewmembers were injured slightly. Investigation disclosed that the bolt which connects the left cyclic control to the aft cyclic bellcrank was missing.

On August 3, 1969, a Fairchild Model FH-1100 helicopter, N421FH, was involved in an accident at Fairbanks, Alaska. As the pilot applied cyclic pitch on takeoff, fore and aft cyclic control was lost. The pilot and his two passengers were injured slightly. Investigation disclosed that the fore and aft cyclic control bolt and nut were missing.

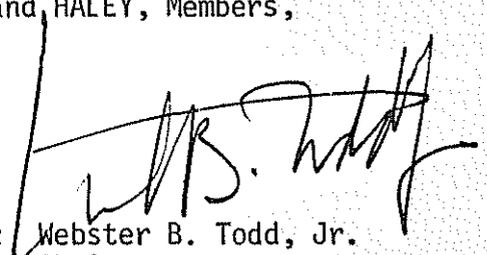
The Board is aware that each of these accidents occurred after maintenance had been performed and that the aircraft was certificated under the provisions of CAR Part 6, which do not require that two separate locking devices be incorporated; FAR 27.607(a) does require such devices. However, the Board concludes that these accidents warrant immediate corrective action to prevent human error in the maintenance of the flight control system of the FH-1100 helicopter.

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

1. Issue an Airworthiness Directive to require an immediate inspection of all self-locking fasteners in the flight control systems of the Fairchild Model FH-1100 helicopters. (Class II--Priority Followup.)
2. Issue an Airworthiness Directive to require that all bolts and self-locking nuts in the flight control systems of the Fairchild FH-1100 helicopters be replaced with dual locking devices. (Class II--Priority Followup.)

Personnel from our Bureau of Aviation Safety have been in contact with your Flight Standards representatives and will be available if any further information or assistance is desired.

TODD, Chairman, McADAMS, THAYER, BURGESS, and HALEY, Members, concurred in the above recommendations.


By: Webster B. Todd, Jr.
Chairman

THESE RECOMMENDATIONS WILL BE RELEASED TO THE PUBLIC ON THE ISSUE DATE SHOWN ABOVE. NO PUBLIC DISSEMINATION OF THE CONTENTS OF THIS DOCUMENT SHOULD BE MADE PRIOR TO THAT DATE.